

1 Ankum is correct in noting that under the PIP contracts the vendor carries the cost  
2 of additional installed facilities until they are "purchased" by Ameritech, he is  
3 comparing apples to oranges. The 90% fill factor applies only to DS1s that have  
4 been purchased and paid for by Ameritech; it does not capture the additional  
5 DS1s that may physically exist on the switch but which have not been paid for or  
6 activated.

7 **Q. At pages 46 and 47, Dr. Ankum states that ARPSM uses expedited prices for**  
8 **Lucent's switches, which do not reflect normal delivery intervals. Is Dr.**  
9 **Ankum correct?**

10 A. Yes, he is. Ameritech originally assumed a seven- to nine-week delivery interval  
11 for Lucent's switches in ARPSM. The seven- to nine-week interval was selected  
12 based on the belief at that time that shorter delivery intervals would be required to  
13 meet the demands of customers and emerging competition. However, data  
14 provided in the Wisconsin proceeding to which Dr. Ankum refers has revealed  
15 that the 14-week interval has been the norm, even though shorter delivery  
16 intervals do occur. Ameritech does not currently have an estimate of the forward-  
17 looking mix of delivery intervals. Consequently, ARPSM and the ULS-ST  
18 studies at issue in this proceeding have been modified to reflect the longer  
19 interval. The revised cost studies have been attached to my rebuttal testimony.

1 **Usage-Sensitive Costs**

2 **Q. Do you agree with Dr. Ankum's assertions at page 14 that conceptually, there**  
3 **are no usage-sensitive costs for switching?**

4 A. No. Dr. Ankum's assertion is fundamentally based on a superficial examination  
5 and short-run view of Ameritech's switch vendor contracts and customers' usage.  
6 It is important to understand that Ameritech Illinois' end-user customers' usage  
7 incrementally causes switch investments.

8 **Q. Why is it important to understand that Ameritech Illinois' end-user**  
9 **customers' usage incrementally causes switch investments?**

10 A. Although Ameritech generally pays its vendors for switching on a flat-rate-per-  
11 line basis, it would be incorrect to infer that Ameritech's true forward-looking  
12 cost of providing switching service is genuinely independent of customers' usage.  
13 Implicit in the PIP contracts is the assumption that the vendor will provide  
14 switching functionality up to a certain hundred call seconds (CCS) capacity.  
15 However, the continuing and rapid increase in network utilization due to, among  
16 other things, Internet and data usage has changed the economics of the network,  
17 and the capacity assumptions implicit in the PIP vendor contracts are beginning to  
18 be exceeded.

19 **Q. At page 14 of his Direct Testimony, Dr. Ankum specifically claims that there**  
20 **are no provisions in Ameritech's vendor contracts that would cause**  
21 **Ameritech to incur usage sensitive costs. Do you agree?**

1 A. No. Each PIP contract has provisions for charges associated with orders that are  
2 designated as usage or CCS jobs. Ameritech Illinois may incur charges for such  
3 jobs. [REDACTED]

4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]

8 **Q. Dr. Ankum also states at page 14 that switch capacity is constrained by the**  
9 **number of line ports and trunk ports served by the switch and, since the**  
10 **switch is installed with sufficient processor capacity to serve all lines, “usage**  
11 **is not a binding constraint on switch capacity.” What is your response to this**  
12 **assertion?**

13 A. Dr. Ankum’s statement is overly simplistic and inaccurate. From an engineering  
14 perspective, as the CCS usage of a switch increases, additional trunk ports must  
15 be installed to serve that usage. For example, a heavily utilized switch may  
16 require one trunk for every 3 or 4 lines, while a lower-usage switch may only  
17 require 1 trunk for every 8 lines. In order to channel these calls from the line to  
18 the trunk “side” of the switch, Ameritech must install additional equipment not  
19 cited by Dr. Ankum, such as umbilicals, line units, and extra switching modules.  
20 In short, a switch requires more equipment than just line cards, trunk cards, and  
21 central processor as Dr. Ankum implies.

22 Due to the additional equipment required, a higher-usage switch costs the vendor

1 more to provide than a lower-usage switch. If the vendor's contractual per-line  
2 price assumes the installation of lower-usage switches, and if usage unexpectedly  
3 increases significantly (thereby requiring the installation of higher-cost switches),  
4 it is reasonable to assume that the vendor will adjust its per-line price upward at  
5 its first opportunity in order to maintain its expected level of profits. Dr. Ankum  
6 made this exact point in his deposition for the Ohio UNE (00-1368-TP-ATA) and  
7 Michigan Shared Transport (U-12622) dockets on 11/29/2000 at pages 73 and 74:

8 Q. Okay. Now, on Page 23 of your testimony, at the very bottom,  
9 you indicate that, ... "...if Nortel had reason to believe that the  
10 line usage would be significantly higher in the future, it would  
11 presumably re-engineer its switches..." Do you see that?

12 A. Yes.

13 Q. Would I be correct to assume that there would be certain costs  
14 with re-engineering the switch?

15 A. When I use the phrase here "re-engineer," I'm not talking about  
16 going back to all existing switches. It would re-engineer the  
17 way that it builds switches and the way that it sells switches,  
18 and so Nortel would then come to Ameritech with a different  
19 contract, or in the next round of negotiations Nortel would say,  
20 "Well, we have found that your switch usage really has gone up  
21 a lot. Instead of charging you, for example, \$100 per line,  
22 we're going to be charging \$120 per line, because now your  
23 lines generate so much more usage on average that I need to put  
24 in extra facilities, more than I used to put in," and so they would  
25 engineer it somewhat differently, and to the extent that more  
26 facilities are involved, they may charge you a higher price.

27  
28 Hence, a forward-looking cost study must account for the additional incremental  
29 cost/investment that the increased usage will cause.

30 In short, Dr. Ankum misunderstands the basic provisioning of switch capacity.

31 Vendors do not install the switches with sufficient capacity to accommodate all

1 potential usage associated with the line ports. In fact, Ameritech's engineers do  
2 place orders, called CCS jobs, for additional equipment to accommodate usage  
3 growth beyond what switch vendors have placed for line growth. This need to  
4 place additional equipment to accommodate usage growth clearly demonstrates  
5 that usage is also a cost-driver for switching investment.

6 **Q. At page 15 of his direct testimony, Dr. Ankum states that "usage does not**  
7 **cause any additional costs to come into existence." Is Dr. Ankum's statement**  
8 **accurate?**

9 A. No. Again, Dr. Ankum's statement is misleading. As I showed above, costs to  
10 the vendor increase with usage. It is therefore irrational to believe that contract  
11 prices would not vary even when the vendor's costs change. If a switch vendor  
12 must install more equipment to accommodate additional usage, logically it will  
13 raise its price at the next available opportunity. In addition, as I have previously  
14 indicated, vendors may separately charge for CCS jobs.

15 As an example of this common-sense phenomenon, an all-you-can-eat buffet  
16 restaurant might set its single price based on an "average" level of food  
17 consumption per person. It is clear that the restaurant's costs would increase if,  
18 for example, the Chicago Bears or the World Wrestling Federation opened a  
19 training facility next door. The restaurateur would quickly raise his price for the  
20 buffet or stop charging on a per-customer basis. The principle for switch vendors  
21 is no different. Dr. Ankum's arguments that switch costs are solely a function of  
22 lines and trunks served would have the Commission believe that the restaurant's

1 costs are solely driven by the number of customers served, irrespective of any  
2 consideration of the amount of food consumed.

3 **Q. Has Ameritech had occasion to add switch capacity as a result of CCS**  
4 **growth even though the line capacity of the switch had not been exceeded?**

5 A. Yes, it has.

6 **Q. Please provide an example where this has occurred.**

7 A. The Lucent switch at the Youngstown, Ohio 78 central office has been  
8 experiencing a decrease in access lines over the past three years. However, the  
9 average usage per line has been increasing over this same period. The equipment  
10 associated with this switch needed to be augmented to accommodate the increase  
11 in average usage per line despite decreasing lines. Consequently, two separate  
12 CCS jobs have been completed over the past three years for this switch. Because  
13 line traffic is still increasing on this switch, another CCS job is scheduled in  
14 several months. Usage directly caused Ameritech to incur additional costs. Dr.  
15 Ankum is either unfamiliar with or overlooks such realities.

16 **Q. Are purchases of additional switching equipment that have been caused by**  
17 **customers' growth in usage unusual?**

18 A. No. While the occurrence of CCS jobs was relatively rare in the early years of the  
19 PIP contracts, their occurrence in the past several years has grown dramatically.

20 [REDACTED]

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]

12 **Q. Are there policy reasons to reject Dr. Ankum's proposal?**

13 A. Yes, there are at least two. First, if the pricing structure of switching shifts from  
14 usage-based charges to line-based charges, as Dr. Ankum suggests, it follows that  
15 low-usage customers would be subsidizing the use of high-use customers, such as  
16 day traders logged into the Internet all day. Second, CLECs would have an  
17 incentive to develop new applications that increase network usage (and a  
18 disincentive to invest in their own facilities), since they would not incur any  
19 additional charges with line-based pricing, although they would be imposing  
20 additional usage costs on Ameritech Illinois.

21 **Q. Are Dr. Ankum's recommendations regarding usage costs and the**  
22 **replacement-growth line relationship inconsistent with each other?**

1 A. Yes, they are. Dr. Ankum first recommends an extremely aggressive  
2 interpretation of vendor pricing when he recommends applying the replacement  
3 line prices to millions of lines in the embedded network not subject to the  
4 contracts, despite explicit contractual limits on the number of lines available at the  
5 low replacement price. However, when it comes to his recommendations  
6 regarding usage-related charges, Dr. Ankum clings dogmatically to the letter of  
7 the contracts. He argues that since no explicit short run usage-related charges are  
8 specified in the contracts, there are no usage-related costs in the network at all and  
9 that therefore his clients should not have to pay for usage.

10 **Q. Has Ameritech ever purchased switching equipment for POTS that has been**  
11 **priced to Ameritech on a usage-sensitive basis?**

12 A. No, Ameritech has not purchased switching equipment for POTS on a per-minute,  
13 per-call, or other usage basis from its switch vendors. Under the vendor contracts  
14 that preceded the Analog Switch Replacement and Partners-in-Provisioning (PIP)  
15 contracts, vendors provided a long list of prices for specific switch equipment.  
16 Ameritech employed numerous traffic engineers whose job was, in part, to  
17 analyze the usage patterns of customers using a switch and determine what pieces  
18 of equipment were required to serve that demand. Even under the intricate,  
19 engineering-intensive contracts that preceded the PIP contracts, usage-sensitive  
20 costs were not explicitly defined. Dr. Ankum's proclamation that the PIP  
21 contracts lack CCS-sensitive contract items is equally applicable to every  
22 preceding vendor contract of which I am aware. Yet, even in these former



1 contracts, as in the current PIP contracts, the usage-sensitive components were  
2 necessarily implicit in the per-port price.

3 **Q. Are the PIP contracts completely silent about usage?**

4 A. No. For example, in addition to provisions dealing with CCS jobs, each contract  
5 has service and performance requirements regarding network traffic. Also, under  
6 the PIP contracts, traffic engineering still occurs, but was substantially taken over  
7 by the switch vendors. [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 **Q. At page 17, Dr. Ankum states that “if costs are implied rather than explicitly**  
15 **found in the switch vendor contracts, then the chain of cost causation that**  
16 **should guide cost analysts in identifying costs is absent.” Please respond to**  
17 **Dr. Ankum.**

18 A. Dr. Ankum’s statement misstates a cost analyst’s job description. Generally,  
19 equipment vendors sell pieces of equipment at a given price. This equipment is  
20 then used to provide various functions, but vendors do not typically set prices  
21 based on these functions or the eventual quantity of usage of the equipment. In

1 the case of switch vendors, a “switch” provides functions such as line termination,  
2 usage, vertical features, etc. Vendors do not explicitly provide prices for these  
3 functions, such as CCS. However, if a vendor’s equipment must provide more  
4 CCS functionality, the equipment it sells must be augmented. The vendor’s costs  
5 will therefore increase, and so a rational vendor will recover these increased costs  
6 in the prices charged for the augmented equipment. These relationships among  
7 function, equipment, and pricing constitute the “chain of cost causation,” and it is  
8 the task of the cost analyst to analyze the links in this chain to assign them the  
9 appropriate cost. In preparing ARPSM, Ameritech’s cost analysts worked with  
10 the switch vendors to identify the costs incurred by switch vendors to provide  
11 CCS usage capacity.

12 **Q. At the bottom of page 17, Dr. Ankum states that “Ameritech’s cost analyst**  
13 **posed the question to vendors how much it would cost them to go back into**  
14 **the switch after it has been installed and to upgrade the switch to**  
15 **accommodate a much higher level of usage.” Is Dr. Ankum’s description**  
16 **correct?**

17 A. No, it is not. Ameritech asked the switch vendors to provide the costs of new  
18 switching equipment supporting CCS levels higher than those assumed by the PIP  
19 contracts. Contrary to Dr. Ankum’s assertion, Ameritech did not ask about  
20 upgrading already installed digital switches. Ameritech used the information  
21 obtained from the vendors to develop a cost per CCS based on the assumption that  
22 each CCS costs the same (the first CCS of usage costs the same as an incremental

1 CCS of usage above that which is typically installed under the PIP contracts).

2 Therefore, Ameritech is not analyzing “the costs of accommodating some higher,  
3 more intense level of usage” as claimed by Dr. Ankum at page 18, but rather is  
4 splitting out the costs of usage at *current* CCS levels, derived by analyzing the  
5 incremental costs of usage. For example, if a vendor contract presumed that a line  
6 port carrying 3 CCS of usage cost \$20, and if a 4 CCS line cost \$21, ARPSM  
7 would compute a line port cost of \$17 and a usage cost of \$1 per CCS, for a total  
8 charge of \$20 ( $\$17 + 3 * \$1$ ) for the actually installed 3 CCS line. This  
9 calculation analyzes the actual usage characteristics of a switch, and does not  
10 attempt to recover costs of usage that does not actually exist in the network.

11 **Q. At page 19, Dr. Ankum asserts that Ameritech asked its vendors to assume**  
12 **that peak usage would double. Is that statement correct?**

13 A. No. My prior answer discusses the reasons that Ameritech asked its vendors to  
14 price higher incremental levels of CCS. Although the usage increment actually  
15 provided by the vendor is entirely irrelevant to the total cost per actual line since  
16 ARPSM simply uses this incremental usage to split the costs of a line given its  
17 *actual* level of CCS, Dr. Ankum has overstated the magnitude of these increments  
18 in his attempt to create an issue where none exists. For example, the Nortel letter  
19 discussed below clearly shows that Nortel provided data that identify equipment  
20 and pricing for various increments of CCS capacity that are substantially less than  
21 double the capacity assumed in the contract prices. Siemens provided similar  
22 information. Although Lucent provided less detail, they did provide a price per

1 CCS that was used in the ARPSM analysis. To state that Ameritech assumed that  
2 peak utilization would double is again a mischaracterization of the analysis.

3 **Q. Please respond to Dr. Ankum's assertion at page 21 of his direct testimony**  
4 **that a need for a special meeting with Nortel to identify CCS costs implies**  
5 **that CCS costs are not significant.**

6 A. Dr. Ankum apparently is surprised that Ameritech would need to arrange special  
7 meetings to address usage sensitive costs with Nortel. Dr. Ankum's observation  
8 is incredibly naive. The issues to be addressed in order to identify economic costs  
9 for LRSIC or TELRIC studies are not the same issues that engineers face when  
10 building and purchasing telecommunications facilities and equipment, and,  
11 therefore, are not the same issues that are most pertinent when negotiating and  
12 interpreting vendor contracts. Consequently, meetings with switch vendors,  
13 which are independent of meetings to determine and negotiate contract terms and  
14 conditions, are needed to clarify and better understand usage-sensitive  
15 investments for purposes of assessing underlying TELRIC/LRSIC costs. Indeed,  
16 such meetings have occurred over the past several decades between switch  
17 vendors and the developers of the previous switching model—Telcordia's  
18 Switching Cost Information System (SCIS) model—previously used by  
19 Ameritech Illinois to identify usage-sensitive switch investments. Ameritech has  
20 followed a similar process in developing usage-sensitive investments for ARPSM.  
21 Thus, it was perfectly reasonable, and in keeping with prior cost-model  
22 development, for Ameritech to discuss and clarify the usage-sensitive elements of

1 the PIP contracts with each switch vendor.

2 **Q. Dr. Ankum also asserts at page 21 that, even if there are costs for “increasing**  
3 **CCS,” the answer is not relevant in this proceeding. Do you agree?**

4 A. No. The implication that usage beyond current demand is irrelevant completely  
5 overlooks the fundamental method by which volume-sensitive costs are identified,  
6 *i.e.*, the application of capacity costing. Simply put, if capacity must be  
7 augmented or the timing of replacement capacity must be moved up because of an  
8 increase in usage, then the entire investment under those circumstances is usage  
9 sensitive.

10 **Q. What is your response to Dr. Ankum’s observation at page 21 that Nortel did**  
11 **not identify very much investment that was usage sensitive for their switches**  
12 **“after scratching their heads in an effort to accommodate one of their bigger**  
13 **clients?”**

14 A. Ameritech asked its switch vendors, including Nortel, to identify the usage-  
15 sensitive portion of their switches. Nortel provided Ameritech with its response.  
16 Ameritech did not base its usage-sensitive investments for Nortel switch  
17 equipment on anything other than what Nortel provided. Consequently, the  
18 innuendo is irrelevant.

19 **Q. At page 22, Dr. Ankum claims that Nortel’s LCM and LGCs are not needed**  
20 **on a forward-looking basis (i.e., with Integrated Digital Loop Carrier**  
21 **systems (“IDLC”)), and thus the usage charges identified in its letter are not**

1       **relevant. Is he correct?**

2       A.     Dr. Ankum is wrong. IDLC is not the forward-looking technology for unbundled  
3             services. Also, IDLC is not the forward-looking technology for all bundled  
4             services under all circumstances. Therefore, the LCM and LCG are needed.

5       **Q.     What is your response to Dr. Ankum's assertion at page 23 that Nortel**  
6             **indicated there are no usage-based costs on a forward-looking basis for**  
7             **Nortel's switches?**

8       A.     This is a red herring, because Nortel said no such thing. [REDACTED]  
9             [REDACTED]  
10            [REDACTED]  
11            [REDACTED] As Schedule  
12            WCP-6 to my Direct Testimony indicated in describing ARPSM, digital switches  
13            in a forward-looking network have both analog lines and digital lines, and  
14            ARPSM includes both. Analog lines connect directly to copper loop facilities,  
15            whereas digital lines connect to digital subscriber loop facilities. [REDACTED]

16           [REDACTED]  
17           [REDACTED]  
18           [REDACTED]

19           [REDACTED] An unbiased perusal of the Nortel letter clearly  
20           demonstrates the misleading nature of Dr. Ankum's assertion.

21       **Q.     Do you agree with Dr. Ankum's claim at page 23 that Lucent's letter is**

1       **“equally unsupportive” of usage-based investments for Lucent’s 5ESS switch**  
2       **family?**

3    A.   No. [REDACTED]

4       [REDACTED]

5       [REDACTED]

6       [REDACTED]

7       [REDACTED]

8       [REDACTED]

9       [REDACTED]

10      [REDACTED]

11      [REDACTED]

12      [REDACTED]

13      [REDACTED]

14      [REDACTED]

15      [REDACTED]

16      [REDACTED] The letter from Lucent provides direct support for the  
17      Lucent usage calculations made by ARPSM.

18    **Q.    Please respond to Dr. Ankum’s criticisms at page 25 of his direct testimony**  
19       **of the correspondence between Siemens and Ameritech that was used to**  
20       **generate CCS costs in ARPSM.**

21    A.    Once again, Dr. Ankum is incorrect. Ameritech only applied in its cost studies  
22       what Siemens identified as usage-sensitive.

**Network Usage Cost Analysis Tool ("NUCAT") Issues**

**Q. At page 52, Dr. Ankum states that you have admitted in Wisconsin that trunk port investments may be calculated based on interoffice usage, and you agreed to do so in Wisconsin. Dr. Ankum presumes that Ameritech Illinois will propose a similar change in this case. Have you made this change?**

A. Yes, we have. Trunk port costs are now calculated in the revised studies attached to my rebuttal testimony based on the same interoffice usage used to calculate transport termination costs. However, although I agree with Dr. Ankum conceptually that trunk port investments may appropriately be calculated based on interoffice usage, I do not agree with the calculation he made in Wisconsin or the calculation he makes in this proceeding. More specifically, Dr. Ankum's calculation reflects an understated per-trunk investment due to the inappropriate weighting of replacement and growth trunks he uses. This weighting as applied to trunks is wrong for all of the same reasons it is wrong when applied to lines, which I have already discussed. My analysis, on the other hand, reflects the mix of replacement and growth trunks that are provided under the switch vendor contracts.

**Q. At page 52, Dr. Ankum states that Ameritech has not provided any cost support for the daily usage feed charges. Please respond to Dr. Ankum.**

A. It appears that Dr. Ankum is now attempting to expand the scope of this proceeding to include rates and costs that have already been decided by this



1 Commission. The tariffed Daily Usage Feed rate has been in effect since April of  
2 1998 and was fully cost supported during the course of the Commission's  
3 TELRIC investigation in I.C.C. Docket No. 96-0486/0569 (Consol.). The cost  
4 study supporting this rate was modified in accordance with the Commission's  
5 February 17, 1998 Order in that proceeding. Further, the cost support for this rate  
6 element has been provided for further investigation in the compliance phase of the  
7 TELRIC proceeding in I.C.C. Docket No. 98-0396. To relitigate this issue, yet  
8 again, would be a redundant and wasteful exercise.

9 **VI. RESPONSE TO MR. GILLAN**

10 **Q. What cost of service issues does Mr. Gillan raise in his direct testimony?**

11 A. First, Mr. Gillan complains at pages 13-17 of his direct testimony that Ameritech  
12 Illinois' ULS-ST filing does not comply with the Commission's order in Docket  
13 No. 96-0486. Second, Mr. Gillan claims that Ameritech is proposing to maintain  
14 the \$5.01 interim rate while inappropriately adding a ULS usage charge. Third,  
15 Mr. Gillan argues at pages 18-19 that Ameritech's proposed ULS usage charges  
16 lack a suitable cost basis in the vendor contracts.

17 **Q. Do you have a response to Mr. Gillan's concerns?**

18 A. Yes, I do. I have already addressed Mr. Gillan's compliance arguments in my  
19 response to Mr. Webber above. Similarly, I explained in my response to Mr.  
20 Webber that Ameritech is not proposing to maintain the \$5.01 interim rate, but  
21 rather has proposed a lower ULS port rate coupled with ULS usage charges.

1 Finally, I have addressed Mr. Gillan's concerns about the cost basis of Ameritech  
2 Illinois' usage charges in my response to Dr. Ankum above. Since I have already  
3 rebutted the substance of Mr. Gillan's arguments in my previous rebuttal  
4 testimony, I will not respond to them further here.

5 **VII. RESPONSE TO MR. GRAVES**

6 **Q. At page 13 of his direct testimony, Mr. Graves asked if Ameritech Illinois has**  
7 **made any changes to its depreciation rates as a result of a December 1999**  
8 **FCC order that adopted a change in the range of allowable depreciation**  
9 **rates for digital switching. Has Ameritech made such a change?**

10 **A.** No. The TELRIC studies developed for this proceeding reflect the depreciation  
11 lives mandated by the Illinois Commission in Docket 96-0486. Specifically, they  
12 assume a 16-year depreciation life for digital switching. The December 1999  
13 FCC order adopted a reasonable range of depreciation lives for digital switching  
14 of 12 to 18 years. Thus, the life mandated by the ICC in Docket 96-0486 falls  
15 within this range.

16 **Q. At pages 13 and 14, Mr. Graves discusses the contract fill rate and suggests**  
17 **that the appropriate forward-looking fill factor for ULS would be the**  
18 **contract fill rate. Do you agree?**

19 **A.** Generally, yes. As discussed earlier in my rebuttal testimony, the only fill  
20 adjustment Ameritech Illinois made in ARPSM was with respect to digital lines

1 provided at the DS1 level. No other fill adjustments were made or required  
2 because all other fill factors were implicit in the contract prices.

3 **Q. Finally, Mr. Graves questions whether Ameritech Illinois is proposing that**  
4 **the Commission approve the interim \$5.01 rate as a permanent rate, and also**  
5 **questions the basis for Ameritech Illinois' proposed ULS usage charges. Do**  
6 **you have a response to Mr. Graves?**

7 A. As stated in my earlier reply to Mr. Webber, Ameritech Illinois is not suggesting  
8 that the \$5.01 become permanent. I have also discussed the basis for the ULS  
9 usage charge in my response to Dr. Ankum above.

10  
11 **VIII. RESPONSE TO MS. LIU**

12 **Q. How do you respond to Ms. Liu's concern at page 8 that the Lucent line and**  
13 **trunk prices are inappropriate because they reflect an expedited installation**  
14 **interval?**

15 A. As discussed earlier, I have provided, in conjunction with my rebuttal testimony,  
16 an updated study to reflect Ameritech's normal procurement schedules.

17 **Q. At pages 8 and 9, Ms. Liu states that ARPSM does not disaggregate the**  
18 **replacement line prices into line investment and trunk investments to reflect**  
19 **the separation in the PIP contracts. Ms. Liu says this causes a downward**  
20 **bias in the trunk investment price equivalent and an upward bias in the line**

1       **investment price equivalent generated by ARPSM. How do you respond to**  
2       **Ms. Liu's concern?**

3       A.     The ARPSM trunk methodology is consistent with the information provided in  
4       the switch vendor contracts. The only trunk prices provided in the contracts are  
5       for growth trunks. In addition, since one vendor provides replacement lines  
6       (including trunks) for \$0 per line, identifying a portion of that \$0 as trunk-related  
7       is an impossible exercise. As an alternative, the ARPSM model first determines  
8       how many growth trunks will be installed under the contracts at the contractual  
9       growth prices and then divides the result by all lines, replacement as well as  
10      growth, that will be provided under the contracts. In effect, this methodology  
11      assigns a zero trunk cost to replacement trunks. Although this methodology in  
12      theory may introduce a slight upward bias in line investment and a slight  
13      downward bias in trunk investment, it results in no double-counting of costs, and  
14      is in my opinion reasonable in light of the constraints and structure of the  
15      contracts.

16      **Q.     How do you respond to Ms. Liu's two proposed alternatives at pages 9 and**  
17      **10 to the single price equivalence?**

18      A.     As mentioned earlier in response to Dr. Ankum, Ms. Liu is, like Dr. Ankum,  
19      confusing the calculation of a forward-looking price per line with the calculation  
20      of a TELRIC price per line. This is intrinsically a two-step process, of which  
21      ARPSM is only the first step.

1 Again, it is important to remember that ARPSM is a calculator that simply  
2 determines the forward-looking market price of switching equipment based on the  
3 contracts Ameritech has with its vendors. ARPSM itself is not a TELRIC model  
4 in the standard sense of the term. ARPSM does not apply the contractual  
5 replacement and growth line prices to the entire network, but rather produces an  
6 average forward-looking price. This average per-line price is subsequently used  
7 in cost models for all the lines in Ameritech Illinois' network as if, consistent with  
8 TELRIC principles, Ameritech Illinois were rebuilding its entire network from  
9 scratch.

10 **Q. In response to Ms. Liu's concern at pages 10 and 11, is the trunk-to-line ratio**  
11 **used in ARPSM reasonable?**

12 A. The 16% trunk-to-line ratio is based on 1997 data that indicated that, on average,  
13 one trunk was required for every 6.25 lines in service. However, more current  
14 data show that one trunk is typically installed for every five lines in service due to  
15 increasing network utilization. Since the 16% figure appears to underestimate the  
16 trunks required to serve an access line, this assumption is conservative.

17 **Q. Is Ms. Liu correct when she states at page 11 that the vendor alone would**  
18 **bear the extra expense of accommodating extra switch traffic volume?**

19 A. No. The switch contracts clearly provide provisions for switch expansion due to  
20 extra traffic volume. I have presented such evidence earlier in my rebuttal.

1    **IX.    RESPONSE TO MS. BUCKLEY**

2    **Q.    At page 4 of Ms. Buckley's testimony, she summarizes her understanding of**  
3        **the various input sources to Ameritech Illinois' NUCAT cost model. Has Ms.**  
4        **Buckley correctly enumerated the appropriate cost model linkages to**  
5        **NUCAT?**

6    **A.**    No, she has not. Ms. Buckley has correctly associated the switching-related  
7        investment inputs to the outputs from Ameritech's ARPSM model; however, her  
8        additional model references are incorrect. As indicated at page 7, lines 10-12, of  
9        my direct testimony, the ECONS model, rather than the Loop Facility Analysis  
10       Model (LFAM) model, is used to develop the annual charge factors (ACFs) that  
11       are required to convert investment values into annual costs. The LFAM model,  
12       which develops investments associated with loop facilities, is not relevant for  
13       purposes of developing usage-related costs.

14       In addition, at page 4, lines 75-76, of her testimony, Ms. Buckley states that  
15       "conversation and non-conversation factors are from the CCSCIS model." As I  
16       show at page 7, lines 18 – 20, "the CCSCIS model calculates SS7 network  
17       investments used for setting up various types of calls." As shown in Ameritech  
18       Illinois' ULS-ST cost study documentation, the computation of a non-  
19       conversation factor is reflected in Tab 7.4, line (x) and all subsequent references  
20       to this factor have been appropriately sourced.

1   **Q.**     **At page 5 of her direct testimony, Ms. Buckley indicates that “as Staff traced**  
2           **input to referenced sources, problems were found.” She goes on to**  
3           **specifically identify Ameritech’s 1999 Billing cost study as the source of the**  
4           **problem. What is your understanding of the “problems” Ms. Buckley**  
5           **purports to have identified?**

6   **A.**     Ms. Buckley’s “problems” do not appear to be associated with the NUCAT model  
7           itself but rather to the vintage of the various supporting cost studies/inputs to  
8           Ameritech’s ULS-ST study.

9   **Q.**     **Ms. Buckley discusses “the matching principle” at page 6 of her testimony.**  
10           **Are you familiar with this particular “principle,” and is it relevant to**  
11           **forward-looking TELRIC cost study development?**

12   **A.**     Based on Ms. Buckley’s subsequent reference to “revenues and expenses are to  
13           match the period of occurrence,” I assume that the basis for her statement has its  
14           roots in financial reporting principles rather than the principles and regulatory  
15           requirements that drive economic cost study development.

16   **Q.**     **Please explain.**

17   **A.**     The Cost Study Organization that supports Ameritech Illinois performs hundreds  
18           of service and network element cost studies each year. These studies require  
19           literally thousands of inputs, many of which require special studies. It is not  
20           always possible, practical, or even desirable to update each and every input  
21           assumption or special study every time a major study such as ULS-ST is

1 performed. Such is the case with the 1999 billing study discussed by Ms.  
2 Buckley. Although the study was performed in 1999, nothing has transpired since  
3 that time that, in the judgment of Ameritech Illinois' cost analysts, would  
4 significantly impact the result of the billing study itself or the larger ULS-ST  
5 study in general. Said another way, although it is labeled a "1999 study," it  
6 remains a valid 2001 cost estimate.

7 **X. RESPONSE TO MS. MARSHALL**

8 **Q. At page 3 of her testimony, Ms. Marshall acknowledges that Ameritech**  
9 **Illinois has filed an updated shared and common cost study in compliance**  
10 **with the Commission's Order in ICC Dkt. 98-0555 ("the SBC/AIT Merger**  
11 **Docket"). She goes on to conclude that Ameritech Illinois' new Shared and**  
12 **Common Cost model "should be investigated in this proceeding." (Marshall**  
13 **Direct, pg. 3, lines 66-67). Do you agree with Ms. Marshall's**  
14 **recommendation?**

15 **A.** I do not agree that the current proceeding represents an appropriate forum for Ms.  
16 Marshall's proposed investigation.

17 **Q. Does the Issues List identified in the Illinois Commission's Order initiating**  
18 **this investigation and/or the Staff's October 19, 2000 Report, support Ms.**  
19 **Marshall's recommendation?**

20 **A.** I do not believe that they do. Issue No. 1 of the Staff Report is "whether the costs  
21 and rates comply with prior Commission and FCC Orders." However, the



1 Commission's Order specifically limited the scope of this investigation to costs  
2 and rates, etc. associated with Ameritech Illinois' ULS-ST UNE offering. At  
3 page 3 of the ICC Order, it stated "an investigation is initiated into whether the  
4 rates and service for unbundled local switching with shared transport provided by  
5 Illinois Bell Telephone Company pursuant to the tariff pages enumerated in the  
6 Appendix to this order are just and reasonable and in compliance with the  
7 provisions of law as specified in Finding (5) above."

8 **Q. Does the fact that this proceeding is focused on investigating the rates and**  
9 **costs for Ameritech Illinois' ULS-ST necessarily preclude Ms. Marshall's**  
10 **recommended investigation of Shared and Common cost loadings?**

11 A. I believe it does for the following reasons. First, shared and common costs are a  
12 component of the TELRIC pricing formula applicable to all of Ameritech Illinois'  
13 unbundled network elements, interconnection, and local transport and termination  
14 offerings. Therefore, any update to Ameritech Illinois' shared and common cost  
15 loading ultimately has an impact on the tariffed prices for all of Ameritech  
16 Illinois' UNEs, etc. Ameritech Illinois does not believe that price changes for all  
17 of Ameritech Illinois' UNEs were an intended result of this Commission's ULS-  
18 ST-specific investigation.

19 **Q. Was the Shared and Common cost study the only cost study updated by**  
20 **Ameritech Illinois in compliance with the Commission's SBC/AIT Merger**  
21 **Order?**

1 A. No, it was not. In addition to the updated Shared and Common cost study  
2 referenced by Ms. Marshall, Ameritech Illinois also filed updated TELRIC cost  
3 studies for all of its UNE, interconnection, and local transport and termination  
4 service offerings as required by the Commission's Order.

5 **Q. Has Ms. Marshall proposed to expand the current investigation to include an**  
6 **investigation into Ameritech Illinois Unbundled Loop costs, etc.?**

7 A. I do not think that was Ms. Marshall's intent at all. However, because an  
8 integrated approach to TELRIC cost development and shared and common cost  
9 identification is required to ensure appropriate cost recovery on a forward-looking  
10 basis, the new Shared and Common cost model is, therefore, more appropriately  
11 addressed in a comprehensive proceeding addressing all of the TELRIC cost  
12 studies filed in compliance with the SBC/AIT merger order as opposed to a  
13 narrowly focused tariff investigation such as the instant case.

14 **Q. Ms. Marshall states at pg. 3, lines 57-58, of her testimony that "Staff's brief**  
15 **in Docket 98-0396 recommends that shared and common costs be**  
16 **investigated in this docket." Did the Commission ultimately adopt Staff's**  
17 **recommendations in that proceeding?**

18 A. As acknowledged by Staff witness Mr. Graves at pg. 11 of his direct testimony,  
19 a Hearing Examiner's Proposed Order has not yet been issued in the cited  
20 proceeding. I do not believe that Staff's briefing position in another proceeding

1       that has not yet been concluded provides the support for Ms. Marshall's proposal  
2       to significantly expand the scope of the present proceeding.

3       **Q.     At page 10, lines 220 through 224, Ms. Marshall contends that if Ameritech**  
4       **Illinois does not introduce a further update to its shared and common cost**  
5       **study, that "it should provide support for the 34.55% shared and common**  
6       **cost factor used in its direct case and should demonstrate that this factor was**  
7       **calculated in accordance with the Commission's decision in Docket 96-0486."**  
8       **Please respond.**

9       A.     The alternative being recommended by Ms. Marshall is duplicative and  
10       unnecessary as the issue of compliance with the Commission's Order in ICC  
11       Docket No. 96-0486 is already being addressed in I.C.C. Docket No. 98-0396.  
12       Staff has already taken the position in that proceeding that Ameritech Illinois has  
13       complied with the Commission's TELRIC Order regarding adjustments to the  
14       shared and common cost pools. (I.C.C. Docket No. 98-0396, Staff Initial Brief at  
15       page 4).

16       **Q.     Does this conclude your rebuttal testimony?**

17       A.     Yes, it does.